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EIGHTEEN DAYS OF VISION AFTER ENTIRE LOSS OF THE
CORNEA.

[Read before the Suffolk District Medical Society November 30th, 1863, and communicated for the Boston Medical and Surgical Journal.]

BY JOHN H. DIX, M.D., BOSTON.

MR. S. F. E., on the 31st of October last, three weeks ago, was attacked with inflammation of the left eye. On the following day, he was seen by his physician, Dr. John C. Page, of Centre Harbor, N. H., who, in a letter to me, describes Mr. E.'s condition as follows:—"I found his eye firmly closed and highly inflamed, and the integuments, in fact the whole side of the face, much swollen, and a large quantity of cream-colored matter issuing from between the lids." Antiphlogistic treatment, local and general, was judiciously adopted by Dr. Page, and thirteen days ago, the inflammation having subsided, the patient found, on raising the lid with his fingers, that he could see, though imperfectly. He believes that vision has been gradually improving ever since.

The condition of the eye is now as follows. The lids somewhat thickened, but not enough to prevent his opening them sufficiently to see. The conjunctiva, so much of it as remains, is moderately injected, as on the subsidence of an acute inflammation. The cornea is absolutely and entirely wanting, unless some portions of it remain in a granulating surface, forming a sort of rim correspondent with the former periphery of the cornea, and of which it is impossible to say whether it is composed of the iris, or the debris of the cornea, or both. There is, of course, no anterior or posterior chamber, but their places are occupied by the crystalline lens, protruding through and supported by the rim above spoken of, as well as by the lateral attachments of the lens. Through the lens, the anterior capsule of which is perfectly clear, he has very tolerable myopic vision, enabling him to read the test type No. 2 of Jaeger, about three inches off. The gradual improvement of vision was probably attributable mostly to the subsidence of the inflammation, in the early period of which the incessant flow of mucus intercepted the light.

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The very remarkable feature of the case is, that in this exposed position, open to the air, the crystalline system, the lens and capsule, has remained perfectly normal and fulfilling the double function of cornea and lens.

With a double concave lens he is enabled to see the same type further off and to discern larger objects; and the condition of his present vision, although it does not conclusively prove, certainly tends strongly to corroborate the idea that the adjustment or accommodation of vision to different objects and distances is effected, in part at least, by change in the position of the crystalline lens, its approximation to or projection from the retina.

This supposition is favored by two circumstances. One is the very extreme myopy caused by this misplacement of the lens, notwithstanding the entire absence of one of the refracting media, the cornea, and the total loss, by reason of mechanical pressure upon the iris, of any effect upon the accommodation of vision which results from the action of the iris,* either in the retraction of its peripheral fibres, the projection of its pupillary margin, or contraction of the pupil itself.

Another and a more significant circumstance attending this case is, that for a period of eighteen days, though projected from its usual position by fully the depth of both the anterior and posterior chambers, the crystalline system, lens, capsule and attachments, remained in perfectly healthy condition, the transparency of neither lens nor capsule being in the least degree impaired. This does not prove that change in the position of the lens is chiefly or at all concerned in the accommodation of vision, but it does show that movement of the lens may take place within a range more than sufficient to accomplish all actual changes of accommodation without disturbing the attachments of the lens through the suspensory ligament or zonula and ciliary processes.

By general consent modern pathologists regard the observations of Helmholtz and Cramer as proving conclusively that the accommodation of vision depends upon a change in the form of the crystalline lens, and not in its position. Not questioning the reliability of such observers, it is to be remembered that the absolute accuracy of minute observations by the ophthalmometer depends upon a condition very difficult of attainment, absolute immobility of the globe itself, with which the mere act of respiration and possibly, also, involuntary action of the external muscles of the globe, may interfere. In regard to this question of the accommodation of vision, it is worth while also to consider that for the compression of a body as dense as the crystalline lens to such a degree as sensibly to change its

* A case of complete dialysis, or separation of the iris, with little or no loss of accommodative power, reported by Dr. Von Graefe in the *Archiv für Ophthalmologie*, proves that the iris contributes not much to the effort for accommodation. Nevertheless, an action of the iris, which in normal eyes always accompanies accommodation to near objects, must be conceded to have some bearing upon this process.

conformation, a much greater force is required than would be needed to change the position of the lens cushioned upon the comparatively soft texture of the vitreous, and resisted in a forward movement only by the aqueous humor.

If observations hereafter confirm the present theory of accommodation, it cannot be invalidated by this case, and I record the case more for the sake of its extraordinary and, in my own experience, unprecedented conditions, than for the possibility that it may aid some future observer in establishing another and more satisfactory theory of accommodation of vision.

In the hurried visit of the patient to me I was not at leisure to make so varied experiments on his vision as were desirable. Five days later, on going to Centre Harbor for the express purpose, I found, to my great disappointment, that the lens had been ejected a few hours before my arrival, vision remaining up to the time of the exit of the lens as it had been for eighteen days.

MECHANICAL ULCER OF STUMP.

[Read before the Suffolk District Medical Society, November 28th, 1883, and communicated for the Boston Medical and Surgical Journal.]

By JOHN GREEN, FELLOW OF THE MASS. MEDICAL SOCIETY, ONE OF THE ATTENDING PHYSICIANS AT THE CENTRAL OFFICE OF THE BOSTON DISPENSARY.

I HAVE ventured to propose the name which heads this paper for the chronic ulceration so often observed, in badly managed stumps, over the exposed end of the bone. The study of several of these cases has led me to the conclusion that the chief obstacle to cicatrization is the tension of the soft parts acting mechanically by resisting the extension of the integument over the end of the bone, and thus admitting of only a very slow and imperfect mode of repair by granulation. It is rare to see this ulcer larger than the area of the cross section of the bone, for the vital contraction which takes place in the development of granulations is almost always sufficient to draw the cut edges of the skin close up to the margin of the bone, leaving it alone to heal, if at all, by less perfect methods. Mechanical ulcer, therefore, is one of the common attendants upon that form of failure known as conical or sugar-loaf stump, and is dependent upon the same cause, viz., the excessive length of the bone as compared with the soft parts left to cover it. Defective methods of operating and of dressing have much to do with causing this accident, as I have already explained in a former paper read before this Society ("On Amputation of the Thigh," see Boston Medical and Surgical Journal for June 11 and 18, and July 9 and 16). I propose now to consider the treatment of this accident, including, as it does, a few thoughts upon the improvement of bad stumps.

In some instances it may be necessary to shorten the bone by removing a section with the saw. This I have not hesitated to do in cases where there was decided projection of the bone denuded of soft tissues, thus saving a very tedious exfoliation extending over a period of several months. The other and chief indication is the complete relaxation of the skin at the end of the stump, so that as cicatrization advances the margins of the integument may be drawn inward towards the centre of the bone. This indication is fully met in the thigh and arm, and to a less degree in the forearm and leg, by the application of a roller compressing the muscles of the stump as high as the next articulation. The tension is thus immediately relieved and the soft parts are forced down so as to form a ring-shaped cushion projecting beyond the end of the bone, which now lies safe at the bottom of a little cavity in the end of the stump, instead of forming the prominent apex of the cone. To secure the full benefit of the roller, it should be firmly and evenly applied from above downwards, so as to compress the muscles of the stump throughout their entire length. In short stumps of the thigh it is generally necessary to take a few turns around the pelvis, approaching the thigh in the manner of the "spica," and in all cases the roller should stop an inch or two above the end of the stump, to keep the lower turns from slipping off. Flannel is perhaps the best material for the roller, as from its elasticity it can be more smoothly applied, and can be worn with greater comfort than linen or cotton.

The following case, which is one of a very considerable number which I have treated by the same method, will serve to illustrate my views upon the nature and treatment of this disease.

J. M., of the 4th Infantry, was wounded in action Dec. 14th, 1862. The thigh was amputated the same day, three inches above the knee. He remained under treatment in hospital for six months, suffering from several attacks of gangrene, erysipelas, &c., and was discharged July 1st, 1863, with a conical stump. In August, he had a fall, striking the end of the stump upon the ground, and exciting destructive action in the imperfectly developed tissues which covered the end of the bone. Oct. 17th, he came under my care. At that time the bone projected beyond the soft parts and was covered only by a thin layer of granulations which showed no tendency to farther development. The skin around the bone was quite tense, and the whole end of the stump was tender and painful. I immediately applied a roller, taking a few turns around the pelvis, and rolling the stump from above downwards to within a couple of inches of the end. The effect of this application of the roller was to push down the skin and muscles, thus rendering them perfectly lax and causing the soft parts to project as a ring-shaped cushion around and beyond the end of the bone. The granulating bone, which now lay at the bottom of a little cavity in the soft

parts, was covered with dry lint, and the dressing was completed by covering the end of the stump with a square piece of cloth confined by a few turns of a roller. The excessive tenderness of the ulcer was immediately relieved, but returned whenever the roller became loose, to be again relieved by its re-adjustment. In two or three days a marked improvement took place in the aspect of the ulcer, which had already begun to cicatrize, and in the course of a fortnight it was reduced to a third of its former area. At the end of a month (Nov. 16th), the ulcer is not larger than a silver three-cent piece, and is rapidly cicatrizing.* The soft parts project three quarters of an inch (by actual measurement) beyond the end of the bone, forming a thick ring-shaped cushion. At the time of dressing, or whenever the roller becomes loose, the end of the stump becomes nearly flat, but without prominence of the bone. The soft parts have become much more lax under the use of the roller, and the effect of the circular compression becomes every day more and more evident. I have directed the patient to continue the use of the roller until the processes of repair are wholly completed and the soft parts become thoroughly consolidated in their present position.

[An old method of relaxing the soft parts by means of several strips of adhesive plaster applied lengthwise to the sides of the stump and attached to a brick or other weight hung over the foot of the bed, has been very ingeniously modified by Mr. B. F. D. Adams, surgical house-pupil at the Mass. Gen. Hospital, and is now frequently employed in the surgical wards of that institution. This plan succeeds very well during the few weeks immediately following the amputation, and while the patient is still confined to his bed, but it can hardly be applied to the treatment of mechanical ulcer, continuing, as it does, for many months beyond the period over which the surgical treatment of a stump usually extends. In this very method, moreover, a roller is applied over the strips of plaster to keep them from slipping, and the result is no better than that which follows the use of the roller alone.]

909 Washington Street, Boston, Nov. 28th, 1863.

REMARKABLE CASE OF FECUNDITY.

[Communicated for the Boston Medical and Surgical Journal.]

MESSRS. EDITORS,—Some days since the Editor of the *Democrat*, at La Crescent (on the west side of the river from this city), handed me your letter asking for the name of the physician, and items concerning a remarkable case of fecundity, as reported in the press of this section, in the case of Mrs. G. H., a German lady. The letter has been awaiting reply until now, and incessant business is the only excuse I can offer. The case was one of such remarkable cha-

* Dec. 1st, 1863.—The ulcer is completely healed.

racter that it has been attracting much attention in the west and southwestern cities. Briefly, I will give you from my case-book such facts as will be of interest.

CASE.—Mrs. G. H., aged 23 years; temperament, nervous sanguine; stature, four feet ten inches; weight, in usual health, one hundred and twenty pounds; muscular system well developed; form good; eyes light blue; hair auburn.

History.—Has never been sick since her first menstruation, which occurred when she was in her thirteenth year, on which occasion she was sick nearly two weeks. Since that time she has enjoyed almost uninterrupted good health, except when pregnant. She was married, if I am informed correctly, in November, 1860, and became pregnant in December of the same year. I was called to accouche her in August, 1861, in her first confinement. The labor was natural, the vertex of each child presenting. Pains regular. She was delivered, in twenty hours, of two living and one dead male children. Her convalescence was rapid. Dismissed the case Sept. 5th.

I did not see her again until June, 1862, when I was sent for to accouche, and delivered her of three males (two living) and one female, living. The first (a female) presented the breech; second, left shoulder; third and fourth, vertex. Convalescence tedious and protracted, with delirium. Dismissed the case July 17th. After that time I did not see her till called again, August 5th, 1863. Was called at half past 3, A.M.; arrived at the house at 6, A.M. On examination, found the membranes ruptured and the left foot presenting. Delivered her of a healthy male child at 8, A.M., and delivered her in fifty-three minutes of two living female children, both presenting the vertex. Convalescence complete on the seventeenth day.

She is now in good health, and when I saw her on the 3d inst., she informed me that she was again pregnant. Such is the history of this remarkable instance, as taken from my case-book. Want of time prevents my giving the details and all the minutiae of the case, which is looked upon in the West as very remarkable.

Mrs. H. is a very pretty looking woman, good complexion, inclined to sociability, but more given to housework than parlor accomplishments. Her husband was drafted, but the citizens kindly raised three hundred dollars for his exemption, and he remains at home, being now in the employ of Rev. B. Mills, on a farm.

Very truly yours, &c.,

La Crosse, Wis., Dec. 11, 1863.

M. M. POMEROY, M.D.

THE class attending the Winter Session of Lectures at the Massachusetts Medical College, in Boston, numbers 213—being the largest medical class ever assembled in this city.

ON OZÆNA AND ITS TREATMENT.

BY PROFESSOR TROUSSEAU.

THE horrible fœtor of the breath which constitutes ozæna is an infirmity so odious and unfortunately so common, that the physician ought, from the very commencement of his career, to make himself acquainted with the causes and treatment of this condition. In the first place, we must be careful not to confound ozæna depending upon the condition of the nasal fossæ with the fœtor of the breath caused by some affection of the mouth or throat. It is not, however, always easy to avoid error. The simplest diagnostic means is to direct the patient to close his mouth and nose alternately during expiration; it is then generally easy to determine the source of the fœtor. This method may, however, prove insufficient, because the vitiated secretions of the nasal fossæ may fall back into the pharynx and communicate their disagreeable odor to the air which passes through that cavity. The physician, however, who has seen a few cases of the kind, will have no difficulty in recognizing the condition in question, for the odor is quite peculiar, so much so, as scarcely to admit the possibility of mistake. This specific odor is, however, chiefly associated with that form of ozæna which is called *constitutional*, and which is specially associated with the scrofulous or herpetic diathesis.

All the secretions which are in contact with the air become altered in their composition if they are not renewed, and this alteration is more considerable in some persons in virtue of conditions which it is not easy to indicate, but which depend as much perhaps on the quality of the secretion at the moment it is formed, as on the special nature of the secreting organ. The nasal secretions in some persons alter with great rapidity, and contract an extreme fœtor which will not be observed in other persons, though much less particular as to the details of the toilet. Ozæna sometimes depends upon this cause; when the nostrils have been cleared of their secretions, the breath is pure; a few hours later it becomes foul if the matters are allowed to accumulate in the nasal fossæ. The remedy for this condition is not far to seek; it consists in using the pocket-handkerchief frequently, and cleansing the nose thoroughly.

In some persons the secretions of the mucous membranes in the normal condition have, like that of the skin, a remarkable fœtor; if these parts are attacked with inflammation, acute or chronic, the fœtor becomes much exaggerated; you may be often struck, for example, with the foul odor of a gonorrhœal discharge. This fœtor persists as long as the inflammation is acute, and, indeed, sometimes persists after it has become chronic. Thus, in some persons, as soon as they contract a coryza, the secretions from the nostrils become of very offensive odor.

The ozæna called *constitutional* is rarely observed during infancy,

even although there should exist at birth some of the anatomical conditions which lead almost certainly to it. It is rare that the condition is established before the fourth or fifth year; it increases towards puberty, continues during adult life, and diminishes but does not disappear completely in old age. This form is distinguished by a fœtor peculiar to itself; the nasal secretions are usually purulent, sometimes they dry up and form crusts which mould themselves to the interior of the nostrils, and there is usually a little bleeding when they are discharged. The purulent discharge is often very abundant, though it is right to mention that it is not in these cases that the odor is most disagreeable unless the ozæna be connected with a disease of the antrum, in which the matter remains, and which is discharged in streams on certain movements of the patient. Almost always on examining the nasal fossæ by means of a small speculum, the mucous membrane will be found reddened. Ozæna has sometimes been ascribed to contraction of the nostrils due to depression of the root of the nose, but there are many persons in whom the nostrils are extremely narrow, and yet in whom the nasal secretions have never a disagreeable odor.

In other cases, rarer, no doubt, the nasal secretions appear quite the same as in other people, and at the same time there is no indication of any inflammatory affection, acute or chronic. Under such circumstances, where there is no inflammation of the pituitary membrane, no necrosis of the bones of the nose; where the individual appears to be in perfect health, where the nasal secretions have a peculiar fœtor, just as the perspiration from the feet has in some people, we are forced to admit the existence of a *constitutional ozæna*. Next to this form we must range that which depends upon a herpetic diathesis, and which is generally associated with scrofulous ophthalmia, and swelling of the upper lip. Not that every eczematous affection of the nostrils will occasion ozæna, but just as in some persons eczema of the feet, vulva, &c., produces secretions of a revolting odor, so in some individuals affected with eczema of the mucous membrane there is a discharge of a most fœtid character.

Of all the causes of ozæna the most frequent is certainly syphilis. In constitutional syphilis coryza is very frequent; although in the great majority of persons it does not give rise to fœtor of breath, it may do so, just as eczema and scrofula in certain persons. Syphilitic ozæna is also important in this respect, that more than any other form it leads to ulcerations and necrosis. Necrosis, whether due to syphilis, to gun-shot wounds, or to fractures, may lead to ozæna. The last condition to be mentioned is disease of the antrum. This account of the causes of ozæna is no doubt very imperfect; it was, however, necessary to premise it before passing to a consideration of the therapeutic means, by the aid of which we sometimes cure and often palliate this cruel infirmity.

In the first place, it must be understood that we can do but little

in the case of ozena which depends upon necrosis of the bones. The dead bone will come away in whole or in part, and the odor will continue as long as any portion of the dead bone remains. It is sufficient to cast a glance at the bones of the head to see how difficult the expulsion of certain portions must be. An ulceration, a necrosis of the walls of the antrum, or a chronic inflammation of the mucous membrane which lines it, will also produce an ozena, for the cure of which we can do little, and in the greatest number of such cases surgery alone can intervene by penetrating the antrum from the upper row of teeth. In all cases where we can attack the cause of the inflammation of the pituitary membrane, and where there are as yet no osseous lesions, the cure is easy; thus in syphilitic coryza without ulceration, mercurials, or iodide of potassium, will soon remove this condition. But where we have to do with a herpetic ozena we have no longer any specific remedies, and the condition is often incurable. By means of arsenical or sulphurous preparations, or iodine, we may do some little good, but it is to topical remedies we must chiefly trust. It is still more difficult to contend against the strumous diathesis, and though we may produce some modification of the constitution, by placing the patient in favorable hygienic conditions, and administering some of the ordinary remedies, we must reckon almost exclusively upon those agents which address themselves directly to the affected mucous membrane.

Powders inhaled the same way as snuff, the direct application of caustic to ulcerated points, injections of different kinds, are the means which have proved most effectual. Not that a cure is easy, far from it, or that it can be obtained in a short time; but, however imperfect the method, we arrive occasionally at relatively good results, which we are glad to have obtained. The following are the powders I generally employ:—

1. Subnitrate of bismuth; Venetian talc, of each half an ounce.
2. Chlorate of potash, 30 grains; powdered sugar, half an ounce.
3. White precipitate, 5 grains; powdered sugar, half an ounce.
4. Red precipitate, 5 grains; powdered sugar, half an ounce.

An essential precaution is to clear out, in the first instance, the nasal fossæ, by sniffing up tepid or cold water, so as to remove any crusts or mucous secretions. It is to the mercurial powders I have recourse in the first instance. The patient should inspire vigorously a pinch by each nostril, and this should be repeated twice or thrice a-day according to the amount of irritation produced. Physicians are not in general sufficiently alive to the irritating action of red or white precipitate; as they are apt to create great irritation, only a small number of inspirations should be prescribed daily, and only for a few days. The immediate effect of these powders is occasionally most remarkable, the fœtor sometimes disappearing, temporarily, it is true, in the course of a few hours.

If we must be cautious in the employment of mercurials, there is no such necessity in the case of the mixture of bismuth and talc, which the patient may inhale as often as he pleases, and which seems to have a really beneficial influence. The chlorate of potash is also a modifier of the mucous membrane, and has the advantage, that, like the mercurials, it causes the odor to disappear whilst it is being employed.

In adults, where obedience can be counted upon, the inspiration of powders, though by no means satisfactory, renders real service; in children they are almost useless, and we must have recourse to injections, which will then be the almost exclusive mode of treatment, whilst in adults they are merely subsidiary.

1. Phagædenic water (yellow wash, more or less diluted).
2. Chlorate of potash, 60 grains; distilled water, 7 ounces.
3. Nitrate of silver, 1 grain; distilled water, $3\frac{1}{2}$ ounces.
4. Sulphate of copper, or sulphate of zinc, 1 grain; distilled water, $3\frac{1}{2}$ ounces.

It must be remembered that the pituitary mucous membrane has a much greater sensibility than is generally supposed, and that even very diluted solutions are borne with difficulty. This sensibility is soon blunted, but the solution should never be much stronger than the above.

The injections should be practised two, three, or four times a-day for several successive days, then recourse may be had to the powders, and so on alternately, care being taken to regulate their strength according to the irritation produced on the mucous membrane, and the influence exerted on the disease. The remedies must often be continued for months without interruption, and when the fœtor has been absent for six weeks or a month, the severity of the treatment may be relaxed.

There is an important practical point to be alluded to. It is generally noticed that at the menstrual period the ozæna augments; and that this also occurs at any time when an inflammation of the pituitary membrane supervenes. Accordingly, under these circumstances, the treatment must be resumed, even if the patient had appeared to be perfectly cured.

Although topical remedies are the most important, we must not neglect general treatment. Cod-liver oil continued for a long time is often useful. Tincture of iodine, given at meal times, in doses of from 5 to 15 drops, seems often to have a good effect. Arsenical preparations persevered in for a length of time seem often to assist the topical medication.

In the treatment of syphilitic ozæna, mercury and iodide of potassium hold the first rank. As to necrosis, disease of the antrum, &c., their treatment is surgical.

I cannot conclude without repeating that this most disagreeable complaint is one of the most difficult to cure, but that it is also one

of those which may be best palliated, if we can be assured of the cleanliness, the docility, and the patience of the sufferer, provided that this patience be only equalled by that of the physician.—*Edinburgh Medical Journal*, from *Bulletin Général de Therapeutique*.

PYÆMIA, OR LEUKÆMIA.

By GEO. R. WEEKS, SURG. U. S. V., IN CHARGE OF CHURCH HOSPITAL, MEMPHIS, TENN.

HAVING recently been much interested in various pathological conditions resulting in pyæmia, leukæmia, or leucocythæmia, and believing that I have observed some facts of interest in this disease, I submit the following observations, taken at the bedside, with a view of calling attention to the true nature and conditions found in those affected by this particular grade of action. If I can be able to contribute in the least degree to this end, I shall feel myself amply rewarded. I believe it closely allied to *hospital gangrene* and blood poisoning, and generally it has appeared to be the sequence of these diseases.

The ideas that I shall present were taken from the observation and treatment of *one hundred and seventy-five* cases of hospital gangrene, one hundred and fifteen of which were observed and reported on by me, in Louisville, Ky. Six occurred in the 17th Army Corps Hospital, at Vicksburg, Miss., of which I had the charge, and fifty-four at this Hospital, during the month of August, with what results will be shown by the following table:—

Summary of Cases treated by Bromine, locally, and their Results.

No Treated.	No. Recovered.	Died.	Died of						Flesh Wounds.	Flesh Wounds, Bone involved.	Average time of arrest.
			Gangrene.	Pyæmia.	Thrombus and Sepsis of the blood.	Mechanical Pneumonia.	Cellulitis.	Diarrhoea.			
146	134	12		3	5	2	1	1	104	42	4.26

Summary of Cases treated without Bromine, and their Result.

29	20	9	4	3	1	1			24	5	18.8
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Fifty-three of these were treated locally by pure bromine, and the average time of arrest was 1.92 days, seldom requiring a second application. Ninety-three were treated by compound balsam of bromine, average time being 8.66 days; and twenty-nine cases were treated by the usual methods, the average time of arrest 18.8 days. All had the same constitutional treatment, and were alike situated in other respects.

The facts noticed during the treatment of these cases point to

the following views with regard to its pathology. That hospital gangrene is produced by a *specific animal poison*, and that it only enters the system by inoculation upon a traumatic surface. That for a variable time after it is deposited upon or in the sore, it is local in character, after which it enters the blood through the agency of the absorbent system, and changes its constituents both vitally and chemically. I have designated this the stage of toxæmia, in which the blood is morphologically changed, the result being thrombus, which, in my opinion, is the plastic portion of the blood, aggregated and semi-organized, necessarily rendering the remainder aplastic and of little use to the economy in the work of repair. I have many morbid specimens now in my possession, that clearly establish the truth of these propositions, in illustration of which allow me to cite a few cases.

Adam Brangle, a private of 1st U. S. Inf'ty, was brought to the 17th Army Corps Hospital, at Vicksburg, Miss., with gangrene of stump of right arm, which had been amputated several days previous to his admission. Upon examining him, I diagnosticated mechanical pneumonia of right lung. He complained of pain in the heart, and over lower lobe of right lung, which then gave a flat sound, with dulness extending upward, and with entire loss of vesicular resonance. No crepitus was heard in the part or above it.

I treated the arm locally, with pure bromine, which arrested the gangrene promptly, and the sore continued to granulate feebly until near death. The pulmonary difficulty continued upward until the entire right lung was involved and half of the left, when he died. I examined him carefully, and noticed his symptoms three times a day, myself, during the time he was under my care, being much interested in his condition.

Autopsy, twelve hours after death. The right lung was very much enlarged, so heavy that it readily sank in water, and so large that it filled the right side of the thorax entirely. Upon section, it presented innumerable dark-colored points of all sizes, which were traced back to where they could unmistakably be seen to be in the pulmonary artery. I hazard little by saying that nearly all the vessels in the right lung were occluded by thrombi. Also a portion of the left was in the same condition, and in none of them was there any signs of a retrograde movement or softening. This was a rapid case, and one that finely illustrates the mode of dying, which was undoubtedly from obstruction of a purely mechanical nature, so far as the lungs were concerned, producing an excess of carbonic acid in the blood, and a deficiency of oxygen from pressure on the vesicles and obliteration of air space. This is the first stage, or one necessary link in the pyæmic process.

II.—James A. Beaver, private Co. A, 33d Iowa Inf'ty Vols., was admitted to this Hospital July 30th, 1863, with gangrene of the ankle, involving the ankle-joint and instep. I examined him Aug.

8th, and diagnosticated thrombus and septic poisoning. I made an unfavorable prognosis. Gangrene had been present since July 17th, and was promptly arrested by the use of bromine, locally, August 12th, but no repair was established. The wound kept clean and had no fœtor. He died August 18th.

Autopsy, ten hours after death. The pulmonary vessels were filled with a dark-colored, semi-fluid substance, and at points portions of unsoftened thrombi yet remained. In some of the larger vessels thrombus was still entire; in others, where the pressure was greatest, softening had commenced. Softening was also observed in the parenchyma, always most advanced in that part nearest the vessel. I found a large thrombus in the left side of the heart, more than half of it softened, and softening of the walls of the heart, with which it came in contact. It looked of a purple color, had a gangrenous odor, and was easily broken down between the thumb and finger upon moderate pressure. I take it that this case points to the transition stage from thrombus to true pyæmia, and marks the process quite clearly.

Death, perhaps, was produced by ichoræmia, depraved or perverted nutrition, caused by the septic condition of the blood, the morbid element of which was due to softened thrombus, and the product returned to the general circulation rendered it more poisonous.

III.—J. H. Sutton, private, Co. I, 36th Ind. Inf'ty Vols., passed through both the above-mentioned stages, and died of the next, or of true pyæmia. Metastatic abscesses were found in the lower lobe of right lung, of all sizes from a millet seed to that of a walnut, and also thrombi, entire and softening, forming new centres for abscesses. The man had been sick a long time, and had gangrene in the popliteal space, which had been arrested previous to death some considerable time, but not in time to prevent ichoræmia.

I cite these three cases as marking the stages leading to the state of pyæmia distinctly and clearly. I have endeavored to present the facts as I have observed them, and let the results follow. *Post-mortem* appearances are nature's teachings, before whose power our most subtle theories and ingenious hypotheses must bow in humble submission. I have examined all that died, in every one of which I have found thrombus in the heart and lungs, in some of the stages before mentioned, in consequence of which I am inclined to look upon them as a necessary condition. I am fully persuaded that Virchow is right in calling it leukæmia, as I shall endeavor to prove hereafter. These remarks are not only true of gangrene, but are equally so of all that class of diseases arising from blood poisoning, in which also ichoræmia plays a secondary part. I am not sure but that it will enable us to explain all the phenomena presented. The accompanying symptoms are very analogous to those arising from the bite of a venomous serpent, and perhaps what will cure

one will arrest the other. I said in the commencement that, primarily, I believe it to be local, and that it passed into the blood by the agency of the absorbents, when toxæmia was produced; but how is this brought about? In what manner are these changes produced? I answer, 1st, By contact of the morbid agent with the traumatic surface. 2d, Transformation of cell contents, which I am inclined to believe is the result of oxydation. 3d, Absorption of the ichorous product, which causes a retrograde movement in the part and also in the constituents of the blood, which I think is chemico-vital in character. The corpuscular change is quite apparent by the aid of the microscope. The red corpuscle loses its hæmagine, which, becoming granular, is deposited in a circle, and aggregated around the outside of the field. The white corpuscles are very abundant and occupy the whole surface. Crystals of ammoniacal salts are formed in abundance, and an occasional fungus may be seen. Virchow teaches that it is not possible for substances, or rather particles of matter to pass through the lymphatic glands, as in the case of cinnabar and tattooing they are arrested and detained there. I cannot say how it is accomplished, but of the fact that the morbid agent does pass the glands, I am well satisfied, and as these are the last row of sentinels to contend against, I can see no reason why it should not proceed onward to the blood. I have a case in point.

James Scott, private, Co. A, 1st Mo., died at this Hospital, on Sept. 3d, in whose thoracic duct I found a well-developed thrombus. I sent it to Surgeon Brinton, U.S.V., Washington. It was about four inches long, and largest in the portion that occupied the receptaculum chyli. It is the first case that I have ever seen or heard of. The glands were enlarged, indurated, and of a dark color, as if filled with pigment granules, which I very much suspect they were. The ichor undoubtedly had passed, as its effects were demonstrated by thrombus in the duct. If so, the whole process corresponds very nearly to Virchow's idea of their function. This case conclusively presents three very important facts, viz.: That the poison, whatever it is, passes through the lymphatic gland; that it is capable of producing thrombus upon the other side, and that the morbid element does not reside in the pigment but in its ichor. I am of the opinion that this settles a vital point in the pathology of leukæmia.

The death of the parts afflicted by gangrene is a molecular one, and I believe should occupy an intermediate position between ulceration and mortification. It is always accompanied by asthenia.

Of the cases observed here during the month, the average temperature of the body was 89° Fah., and the number of pulsations was 101, which significantly pointed to the manner in which they die, and to the indications for treatment. In the formation of thrombus I have invariably found them of the shape of the vessels,

upon the right side, and globular upon the left, and in the latter seldom extending into the vessels. I have one of the left auricle now, weighing 482 grains, and one of the right side, representing every branch of the pulmonary artery, which had its attachment to the right ventricle.

It will be inferred, from what I have said previously, that I regard the disease as curable, before its consequences are constitutionally developed. This is exactly what I at present believe. I can see no reasonable prospect of reaching it afterwards, and would not know how to make a rational prescription, with my present views of its pathology, other than to support. Upon the appearance of thrombus in the *heart* and *lungs*, which is easily detected by physical signs, hope with me ceases. Some may recover, but I have not seen them. The rational remedies indicated I believe to be, oxygen, fluorine, chlorine, bromine, &c. I expect much from the judicious application of the former, and shall try it as soon as opportunity offers. Fluorine is too dangerous. Chlorine can only be obtained in a fluid state, under great pressure, or in the form of mechanical mixture, hence the selection of bromine, which is in the best form, easiest of application, and over which condition I believe it to have a specific influence. I am of the opinion that it will arrest gangrene wherever it can be brought in contact with all the pulp or pultaceous matter. This is very difficult to do in the burrowing form of the disease, and also, from the nature of some wounds, it is nearly impossible to reach every part with the remedy.

I have been industriously seeking an agent that would destroy poison in the blood, or counteract its effects, but up to the present time have found none. I first tried the hyposulphites, then bromine by inhalation, and then internally. I have observed no beneficial effects from the hyposulphites, or the inhalation of bromine, but am inclined to believe that the internal administration of bromine is of some value, how much I am unable yet to determine. I am now putting it to a severe test, in all the cases under my care, and noting its effects closely, with a view to settling this point. I am using the following formula:—*R.* Bromin. sol. comp., f ʒ ij.; aquæ distillat., f ʒ ij.; syr. simp., f ʒ ij. *M.* S. Teaspoonful every six hours.

I am favorably impressed with the remedy, but will not be able to speak with certainty until I have tried it for a longer period, and observed its effects more closely.—*Chicago Medical Journal.*

THE New York Society for the Relief of the Widows and Orphans of Medical Men has a fund of about \$50,000, mostly invested in mortgages and 5-20 U. S. bonds, and at present has but few pensioners.

 THE BOSTON MEDICAL AND SURGICAL JOURNAL.

 BOSTON: THURSDAY, JANUARY 7, 1864.

WORK FOR THE BOSTON MEDICAL ASSOCIATION.—How much or how little truth there may be in the popular belief in relation to the want of unanimity of opinion among medical men we do not care to consider, but we do not hesitate to affirm that upon one subject at least, which has been brought before every member of our profession during the past week, there has been no difference of opinion. At the end of a year of unprecedented prosperity among nearly all classes of the community we cannot help reflecting, as we apply ourselves to the pleasant task of making out our bills and strike the balance between our expenditures, in which there can be no mistake, and our prospective income, of the amount of which, alas! we are never sure, how unfairly the times are affecting us. Our marketman, our grocer and tailor and coal merchant, and all our patients in their various callings, have not failed long ago to discover that a dollar no longer represents what it once did, and accordingly, like sensible men, have advanced their prices in conformity to the depreciation of money. If M is obliged to pay C twelve dollars for a ton of coal, he demands an equivalent price for the beef he sells him, so that at the close of the year they all find their income unaffected by the universal increase in the expenses of living. We, however, have gone on paying them on the spot all they demand, while for our own services we have been foolishly content to ask them to pay, if they please, a price fixed for us long ago, and almost as little proportionate to the present standard of money as if it were expressed in wampum. And it is this reflection which has come to every physician during the past week, in sight of the immense difference in the relative increase in the amounts upon the debit and credit columns of his account book, that some concerted and immediate action should be taken with regard to the reformation of the present fee-table. We say concerted, for we know that certain gentlemen, whose patients are the rich and whose incomes are such that household expenses need cause them no anxiety, have taken independent action in the matter, and pay little if any regard to the laws of our medical police, while the young and less fortunate are obliged in most cases to be content with the old minimum fee and dare not exceed the maximum in their few "best families." Did the amount of practice like other business increase in proportion to the surrounding prosperity, we might find in such increase the remedy for our present wants: but fortunately for mankind, plenty and joy do not make the sick list larger, but smaller, and the physician's services are most in demand when adversity and poverty deprive the patient of the means of repayment. We trust, therefore, that the Boston Medical Association will take the matter into earnest consideration, and revise their present code at this opportune season, so that the public may be informed at the beginning of the year of a change, which should have been made long ago.

RESECTIONS.—At the meeting of German naturalists and physicians held at Stettin, in September, 1863, there was a discussion in relation to Resections, which is reported as follows in the *Allgemeine Wiener Medizinische Zeitung*.

Bardeleben had performed the operation 7 times upon the hip-joint and 9 upon the knee-joint, the result being so favorable that only three of the cases were fatal. He explained at length the method of operation, praised the plaster bandage in the after-treatment, and dwelt upon the two following important points for the success of the operation :—

1. None of the capsule of the joint should be allowed to remain.

2. The after-treatment must be carefully and minutely attended to. A plaster bandage strengthened by strips of wood is best adapted to this purpose; and it should be water tight, so that the water bath may be employed.

The subsequent discussion had special reference to these four points : mortality, use of the limb after operation, its management and after-treatment. Wilms stated that of 6 resections upon the hip- and of the same number upon the knee-joint, 4 of those operated upon died; Mitscherlich said that of two cases of the knee-joint in Langenbeck's clinic, one of them recovered with ankylosis, the other with a movement of twenty degrees; there were also four or five resections of the hip-joint, and of these only two remained alive. Wagner performed two resections at the knee-joint, one with a favorable, the other with a fatal termination. In Bardeleben's cases one walked without a cane, two with a cane, the others with two canes or crutches. Heyfelder saw all the patients he operated upon at the knee-joint die of pyæmia; with those at the hip-joint he obtained a better result. In Paris they are now entirely opposed to the performance of this operation upon the knee-joint, partly for the reason that they have made too large incisions there, which will account for the unfavorable results of the operation and the prejudice against it. Manuel saw among four resections of the knee-joint two favorable and two unfavorable results. Eulenberg observed that resections in London were undertaken with the best success, while in Paris the unfavorable results were due to the bad condition of the hospitals. Bardeleben maintained that all these data were far too limited and indefinite to furnish material fit for statistics.

With regard to the second point, the usefulness of the extremity, Wilms stated that two of his patients could not walk without a cane; to which Wagner replied that one could judge the result of the operation in this respect only at a much later period, inasmuch as it was often the fact that shortening as well as ankylosis and cure resulted at a very late period, an observation which Bardeleben confirmed. There had been a distinction made as to whether the operation should be performed after carious destruction of the bone or after gun-shot wounds, and Stromeyer had expressed himself against it in the latter case, still Bardeleben thought this precaution should not be too closely observed, and Manuel had shortly before communicated a case, where the resection of the knee-joint had been attended with the most favorable result after a gun-shot wound. Friedberg observed that the limb should be brought into a middle position between flexion and extension.

Wagner recommends the removal of the patella on the following grounds:—1. Because in the desired bony ankylosis it is no longer necessary; 2. Because the preservation of the synovial capsule is very difficult; 3. Because it afterwards undergoes morbid changes and may interfere with the cure. Simon observed that Langenbeck preserves the patella in order to render a slight mobility of the joint possible, and further that Roser's method of resection of the hip-joint was very difficult; he had attempted its performance only upon the dead body. Wilms and Bardeleben also confirmed its difficulties. Ravoth asked if the converging of the whole wound by a firm bandage was injurious. Bardeleben thought this was not desirable, since the wound must heal by suppuration, although the air should be kept from it as much as possible, in order to protract the suppuration. Eulenberg inquired whether ankylosis furnished an indication for resection? Bardeleben answered in the affirmative, in case the anticipated favorable result of the operation outweighed its dangers. Simon and Wagner were of the same opinion.

THE following is a list of the physicians and surgeons appointed for the new City Hospital. The selection has been made with rare judgment and good sense. The community is under great obligations to the gentlemen through whose influence these appointments have been made. We congratulate the medical profession, also, that they are so well represented in the administration of the new hospital.

Consulting Physicians and Surgeons.—Drs. John Ware, John Jeffries, A. A. Gould, S. D. Townsend, Winslow Lewis, Silas Durkee.

Visiting Physicians.—Drs. John C. Dalton, Wm. W. Morland, Fitch Edward Oliver, J. Baxter Upham, J. N. Borland, J. G. Blake.

Visiting Surgeons.—Drs. Charles H. Stedman, Charles E. Buckingham, Duncan McB. Thaxter, Charles D. Homans, Algernon Coolidge, David W. Cheever.

Ophthalmic Surgeon.—Dr. Henry W. Williams.

PSYCHOMETRY.—Spiritualism has undergone a new development. Satiated with the commonplace and fruitless triumphs of bewitching furniture, floating in the air, and interpreting raps, the mediums have made a fresh start, and now announce that they have acquired the power of reproducing in all its vividness and completeness the mysterious past. The process by which this is accomplished seems an easy one. It is called psychometry, and the favored few who possess the retrospective power are known as psychometers. Most, if not all, the psychometers are feminine, and American. These gifted ladies, by merely touching a piece of anything—be it bone, or stone, or aerolite, or even a fragment of crockery—can immediately tell all that has ever happened to it. In the case of a piece of bone, contact immediately informs them everything about the animal to which it belonged, the circumstances under which it lived, the scenery and conditions by which it was surrounded, its habits and sensations. And this is not all. The psychometer is transported at once to the part of the globe which the animal has inhabited, and is able to describe all the features of the journey. Or if it be a stone, she can directly give information as to its geological belongings, the formation whence it was derived, the place from which it was taken, and all the vicissitudes it has undergone.

Mere handling is enough, but usually the psychometers place the substance in contact with the forehead. One lady, by sitting in the moonshine and allowing the beams to play on her forehead, got such an insight into the structure of the moon that she immediately described it in full to the astonished bystanders. Mrs. Denton, of Boston, U.S., thus described her sensations on having a whalebone cane applied to her forehead:—"I feel," she said, "as if I were a monster. I feel like vomiting. Now, I want to plunge into the water. I believe I am going into a fit. My jaws are large enough to take down a house at a gulp." Another, on being placed in contact with a boulder, expressed her feelings thus:—"Mercy! what a whirl things are in! I do not know what to make of it. I feel as if I were being belched out of a volcano. Here is water and mud, and everything is in great confusion. There are great pieces of rock beside me, some larger than I feel myself to be, though I am of great size. I am sent up whirling in a torrent of water, mud and rocks; not sent out at once, but in alternate puffs, and all of us flying round together." Of course as the vicissitudes to which matter is subjected are numerous, the ladies describe their sensations as somewhat complicated, but they tell us that by an effort of the will they can fix for a time the more interesting scenes as they pass before them. This, no doubt, is a fortunate and pleasant thing for the psychometers. As the dust of "imperious Cæsar" may stop a bung-hole, the passage of the Rubicon would be a more striking experience than the lengthened vision of a beer barrel. And we should hope, for the lady's sake who was mentally metamorphosed into a whale, that she did not permit the qualmishness and threatening fit to last long. We wonder, by the way, whether these are the normal feelings of whales. The husband of the fair cetacean asserts that this experience was accompanied by universal shuddering—but this might perhaps be accounted for by the cold sea-bath in which she was psychometrically plunged. We really congratulate the mediums on having struck out a new path. It is true that for many the mysterious future has even a greater charm than the mysterious past, but the former is a somewhat used-up region, the field of prophetic vision being already occupied by Zadkiel and numerous other seers, lay and clerical. We would only observe that in adopting the opposite course the mediums have taken the field against science, and the latter must look to her laurels. Alas for Owen, Falconer, Huxley, and the doughty savans who Samson-like have attacked an unbelieving world with the Abbeville jawbone! Their occupation's gone. It was thought a wonderful feat to construct the skeleton of the *Dinornis* from merely looking at a piece of its femur; but what is this to being able to give a description of a vast number of animals of the tertiary era, whose existence is as yet unknown to geologists? We are very anxious to know whether this resuscitated fauna would supply the missing links for Mr. Darwin. A full view of the early inhabitants of England has already been vouchsafed to one lady, and we have the satisfaction of learning that they were "scarcely human, incapable of standing upright, though formed so as to sit comfortably; very hairy, with a good deal of fun and frolic, and with a crescent-shaped mouth." All these, and many more wondrous revelations are seriously recorded in a book entitled "*Nature's Secrets; or Psychometric Researches*," written by a Mr. Denton, who styles himself a Lecturer on Geology at Boston,

and edited by an anonymous English clergyman. Truly these gentlemen must have formed an exalted estimate of human credulity!—*London Medical Times and Gazette.*

EIGHT LIVING CHILDREN IN TWO YEARS.—Dr. Pomeroy, of Wisconsin, reports, in the *JOURNAL* of to-day, a remarkable case of fecundity in a patient under his care. This case bids fair to exceed, in the number of living offspring, any of the cases referred to by Dr. Warren in the *JOURNAL* of May 22, 1862; and we trust Dr. Pomeroy will not fail to keep the profession informed of the ratio of increase hereafter, and also of the state of health of the children now living, with various other particulars connected with so remarkable a case.

The number of deaths recorded in Boston during the last year was 4698, being 578 more than during the previous year.

The deaths in the town of Sudbury, Ms., during 1863, numbered 40; average for the six preceding years, 23½. The average age of the whole number last year was about 54½ years; seventeen were over 70, and one over 100. The population of the town in 1860 was 1693.

In Newport, R. I., during the last year, sixty-one persons died who were over 70 years of age, two being over 100.

The amount of expenditures at the City Infirmary, in Cincinnati, Ohio, during the year preceding the last annual report, was \$88,634.29, being \$6000 less than the amount paid out the preceding year. There were 14,035 applicants during the year—9,139 less than the year before.

VITAL STATISTICS OF BOSTON.

FOR THE WEEK ENDING SATURDAY, JANUARY 2d, 1864.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	55	51	106
Ave. mortality of corresponding weeks for ten years, 1853—1863,	40.4	39.9	80.3
Average corrected to increased population	00	00	87.87
Death of persons above 90	0	1	1

Mortality from Prevailing Diseases.

Phthisis.	Croup.	Scar.Fev.	Pneumon.	Variola.	Dysentery.	Typ.Fever.	Diphtheria.
20	8	7	13	0	0	1	3

PAMPHLETS RECEIVED.—Death: its Economy and Beneficence. An Address delivered before the Medical Class of the University of Vermont, Tuesday evening, June 9th, 1863. By Henry M. Seely, M.D.

DIED.—At Swanton, Vt., Dec. 22d, Dr. Seneca E. Parks, aged 53 years.—In Texas, Sept. 9th, of typhoid fever, Ariel I. Cummings, Surg. 42d Mass. Vols., late of Roxbury.—In Wareham, Jan. 5th, suddenly, Dr. Benjamin F. Burgess, aged 40 years.—At Walpole, N. H., 30th ult., Dr. Ebenezer Morse, 78.—In Colchester, Vt., Dr. John S. Webster—a prominent citizen of the town.

DEATHS IN BOSTON for the week ending Saturday noon, Jan. 2d, 106. Males, 55—Females, 51.—Accident, 4—anæmia, 2—apoplexy, 1—asthma, 1—inflammation of the bowels, 1—congestion of the brain, 2—inflammation of the brain, 1—bronchitis, 1—burns, 1—consumption, 20—convulsions, 2—croup, 8—diphtheria, 3—dropsy, 3—dropsy of the brain, 4—scarlet fever, 7—typhoid fever, 1—disease of the heart, 4—homicide, 1—infantile disease, 2—intemperance, 2—disense of the kidneys, 1—congestion of the lungs, 1—inflammation of the lungs, 13—old age, 2—paralysis, 4—peritonitis, 1—pharyngitis, 1—pleurisy, 1—rheumatism, 1—scalded, 1—srofula, 1—tumor, 1—whooping cough, 1—wounded in battle, 1—unknown, 5.

Under 5 years of age, 40—between 5 and 20 years, 6—between 20 and 40 years, 23—between 40 and 60 years, 20—above 60 years, 17. Born in the United States, 68—Ireland, 27—other places, 11.